

REMARKS/ARGUMENTS

Claims 1, 3-10, 15-18, 20-24, 28-40, and 43-47 are pending in this application. Claims 16-18, 20-24, and 28-40 are subject to restriction and are thus withdrawn. By this amendment, claims 2, 11-14, and 19 are cancelled without prejudice, claims 1, 3-6, and 9 are amended, and new claims 43-47 are added. Claim 1 has been amended for clarity and to recite the treatment of specific diseases. Support for the amendments to claim 1 may be found in the description at, for example page 3, lines 13-19. Claims 3-6 have been amended for consistency with the amendments made to claim 1. Claims 3 and 9 have also been amended to correct typographical errors. New claims 43-46 have been added to more fully claim the invention. Support for claim 43 may be found, for example, in original claim 39. Support for claims 44 and 45 may be found, for example, at page 3, lines 13-19 of the description. Support for claim 46 may be found, for example, in original claim 1. Support for claim 47 may be found in the description at, for example, pages 5 and 7.

35 U.S.C. 102

Claims 1-4, 6-13, and 19 were rejected under 35 U.S.C. 102(a) as being anticipated by Guy (WO 02/094862). Claim 1 has been amended to be directed to a method for treating a disorder selected from the group consisting of neurodegenerative diseases, muscular dystrophies, stroke, diabetes, hemophilia, and wounds. The claimed method comprises inducing in a cell the expression of at least one cell survival gene, by introducing and expressing in said cell a nucleic acid sequence encoding a functional transcription factor selected from the group consisting of EPAS1, HIF-1 and HIF-3 or a functional analog thereof.

Guy is directed to induction of angiogenesis by increasing VEGF expression. In particular, Guy shows HIF-2 α (EPAS1) increased VEGF expression and angiogenesis in skeletal muscular cells (SkMC). In contrast, the presently claimed invention is directed to increasing cell survival to allow for the treatment of the recited disorders. Cell survival is increased in the presently claimed method by providing a nucleic acid sequence encoding a functional EPAS1, HIF-1 α , or HIF-3 α transcription factor.

Guy in no way teaches or suggests the presently claimed invention. In the Office Action, particular reference is made to Table 2 of Guy, which lists various genes that were found to be activated by HIF-2 α in SkMC. In addition to VEGF, the list of activated genes comprises IL-8, IL-6, PlGF, LIF-R, PAI-2, and MMP7. All of the genes are listed in the context of being angiogenic genes (see page 4, lines 6-7 of Guy):

"Interestingly other angiogenic genes were activated (Table 2). As VEGF, Interleukin-8 (IL-8) and the activation of Leukaemia Inhibitory Factor Receptor (LIF-R) are known to stimulate the proliferation of endothelial cells."

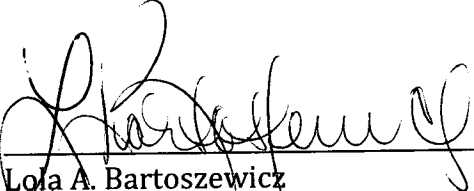
Guy concludes, at page 44, lines 7-9, that HIFs offer great potential for myocardial regeneration and improvement of cardiac function. However, Guy is silent as to the presently claimed method of increasing cell survival with the use of nucleic acid sequences encoding EPAS1, HIF-1 α and HIF-3 α and contains no teaching, suggestion, or motivation to use the claimed nucleic acid sequences in the treatment of neurodegenerative diseases, muscular dystrophies, stroke, diabetes, haemophilia, and wounds, as is presently claimed. Accordingly the presently claimed method is patentable in view of Guy and it is requested that the rejection be withdrawn.

Should the Examiner wish to discuss the foregoing response and amendment, Applicants would appreciate a telephone call to their undersigned representative.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 19-2253.

Respectfully submitted,
Sim & McBurney

September 16, 2011



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